

FIG. 1

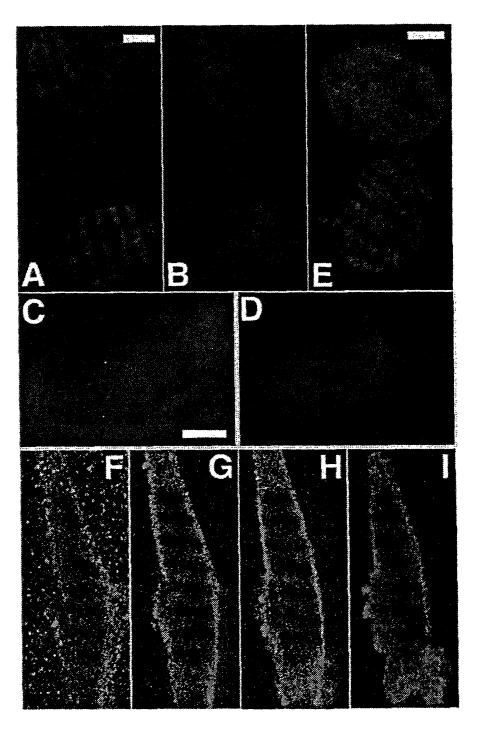


FIG. 2

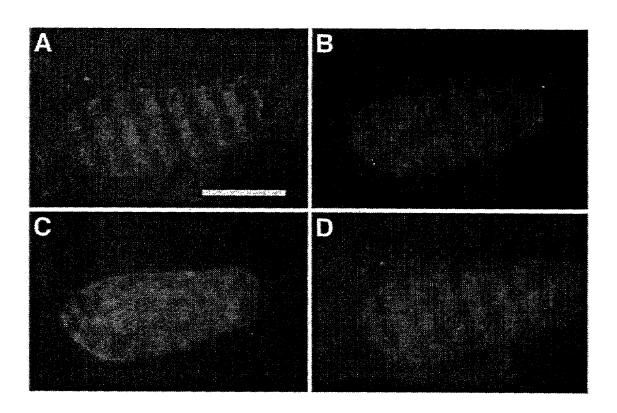


FIG. 3

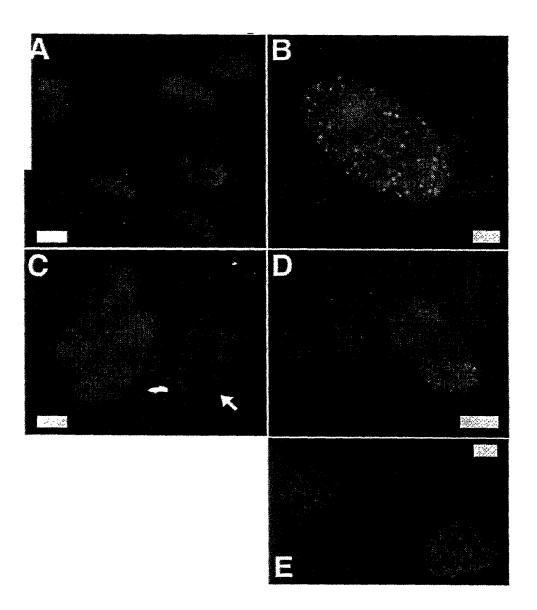
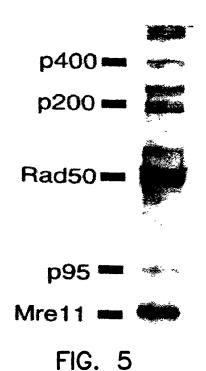


FIG. 4



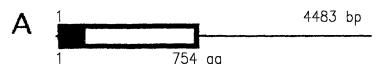
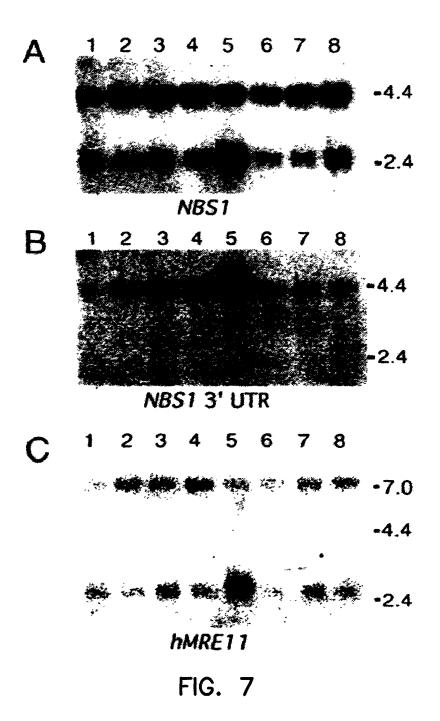
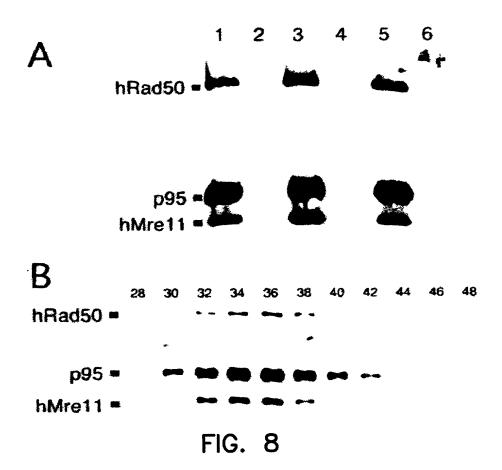




FIG. 6





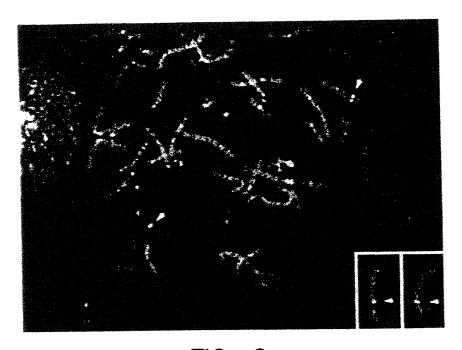
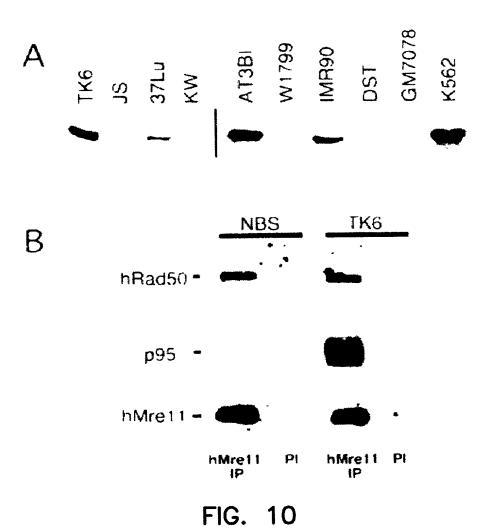


FIG. 9



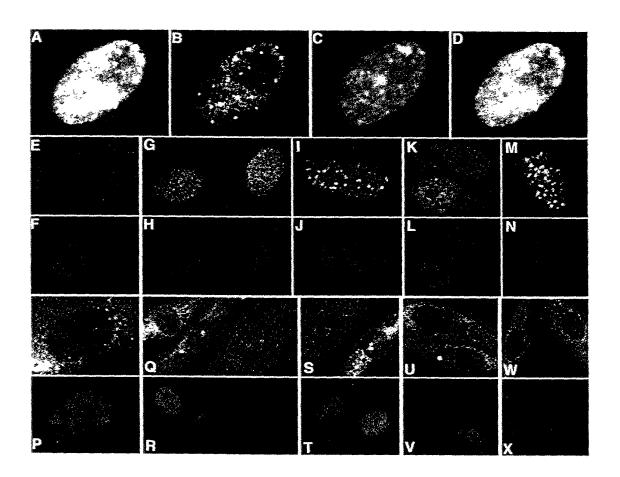


FIG. 11

Amino Acid	Codon	
Phe	UUU, UUC	
Ser	UCU, UCC, UCA, UCG, AGU, AGC	
Tyr	UAU, UAC	
Cys	UGU, UGC	
Leu	UUA, UUG, CUU, CUC, CUA, CUG	
Trp	UGG	
Pro	CCU, CCC, CCA, CCG	
His	CAU, CAC	
Arg	CGU, CGC, CGA, CGG, AGA, AGG	
Gln	CAA, CAG	
Ile	AUU, AUC, AUA	
Thr	ACU, ACC, ACA, ACG	
Asn	AAU, AAC	
Lys	AAA, AAG	
Met	AUG	
Val	GUU, GUC, GUA, GUG	
Ala	GCU, GCC, GCA, GCG	
Asp	GAU, GAC	
Gly	GGU, GGC, GGA, GGG	
Glu	GAA, GAG	
FIG. 12		

Original Residue	Exemplary Substitutions	Preferred Substitutions
Ala (A)	val; leu; ile	val
Arg (R)	lys; gln; asn	lys
Asn (N)	gln; his; lys; arg	gln
Asp (D)	glu	glu
Cys (C)	ser	ser
Gln (Q)	asn	asn
Glu (E)	asp	asp
Gly (G)	pro	pro
His (H)	asn; gln; lys; arg	arg
Ile (I)	leu; val; met; ala; phe norleucine	leu
Leu (L)	norleucine; ile; val; met; ala; phe	ile
Lys (K)	arg; gln; asn	arg
Met (M)	leu; phe; ile	leu
Phe (F)	leu; val; ile; ala	leu
Pro (P)	gly	gly
Ser (S)	thr	thr
Thr (T)	ser	ser
Trp (W)	tyr	tyr
Tyr (Y)	trp; phe; thr; ser	phe
Val (V)	ile; leu; met; phe; ala; norleucine	leu

FIG. 13

12/13

ttcggcacgaggcgcggttgcacgtcggccccagccctgaggagccggatcgatgtggaaactgctgcccgccgcggggcc ccctgtattgacattaaaagataattctaagtatggtacctttgttaatgaggaaaaaatgcagaatggcttttcccgaa $\verb|ctttgaagtcggggatggtattactttttggagtgttttggaagtaaattcagaatagagtatgagcctttggttgcatgc|\\$ tettettgtttagatgtetetgggaaaactgetttaaateaagetatattgeaaettggaggatttaetgtaaaeaattg gacagaagaatgcactcaccttgtcatggtatcagtgaaagttaccattaaaacaatatgtgcactcatttgtggacgtc caattqtaaaqccaqaatattttactgaattcctgaaagcagttcagtccaagaagcagcctccacaaattgaaagtttt aqqqaaaacatttatatttttqaatqccaaacaqcataaqaaattqaqttccqcaqttqtctttqqaqqtqqqqaaqcta ggttgataacaqaagaagaatgaagaagaacataatttctttttggctccgggaacgtgtgttgttgatacaggaataaca aactcacagaccttaattcctgactgtcagaagaaatggattcagtcaataatggatatgctccaaaggcaaggtcttag acctattcctgaagcagaaattggattggcggtgattttcatgactacaaagaattactgtgatcctcagggccatccca gtacaggattaaagacaacaactccaggaccaagcctttcacaaggcgtgtcagttgatgaaaaactaatgccaagcgcc ccaqtqaacactacaacatacqtaqctgacacagaatcagaqcaagcagatacatgggatttgaqtgaaaggccaaaaga aatcaaagtctccaaaatggaacaaaaattcagaatgctttcacaagacgcacccactgtaaaggagtcctgcaaaacaa

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13/13

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FIG. 15